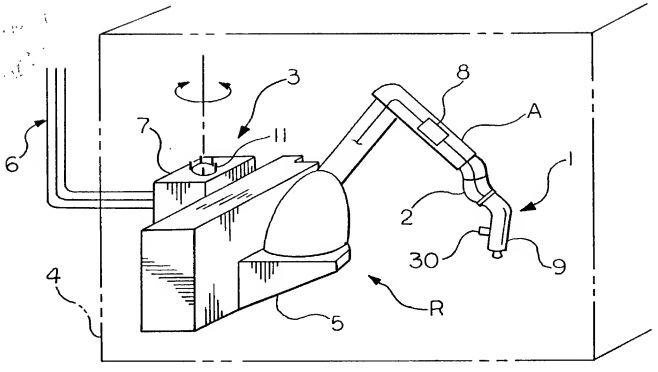


FIG. 1

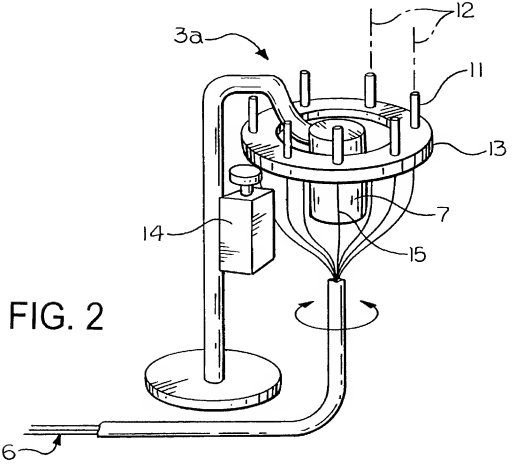


FIG. 2

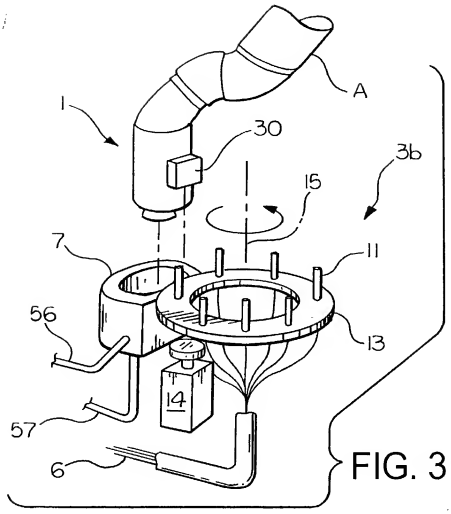


FIG. 3

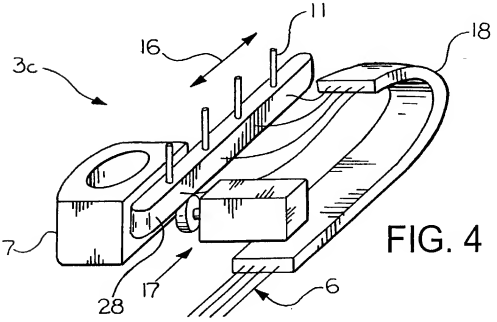


FIG. 4

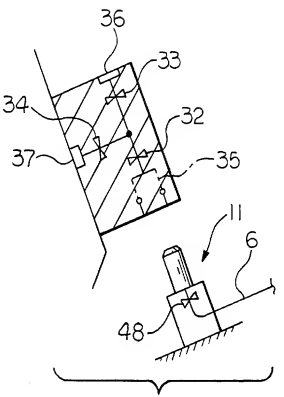


FIG. 5

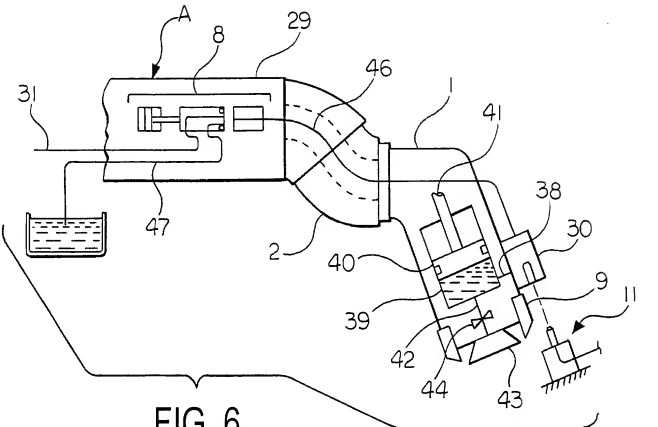
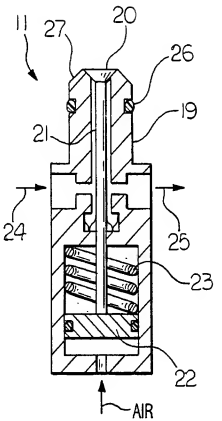


FIG. 6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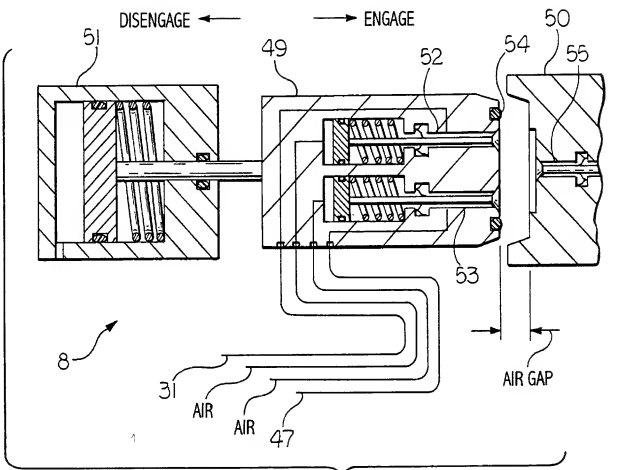
AIR

FIG. 7


DISENGAGE
ENGAGE
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AIR
AIR
47
AIR GAP

FIG. 8

PROCESS STEP	DESCRIPTION	VALVE STATE									DOCKING POSITION	PISTON POSITION
		8	52	53	55	32	33	34	44	48		
A	FINISHED PAINTING GREEN										REMOTE	AT BOTTOM
B	CLEAN PISTON FACE AND BELL CUP, INDEX INJECTOR	ON	ON		ON		ON	ON	ON		REMOTE	OSCILLATE NEAR BOTTOM
C	DOCK WITH PAINT SUPPLY										DOCKED	AT BOTTOM
D	PRIME LINES WITH RED PAINT					ON		ON	ON	ON	DOCKED	AT BOTTOM
E	FILL CANISTER WITH RED PAINT					ON		ON		ON	DOCKED	RETRACTING
F	LEAVE DOCK & CLEAN INJECTOR	ON	ON		ON	ON	ON				NEAR	AT TOP
G	CLEAN CONTROL VALVE FACE	ON	ON	ON							REMOTE	AT TOP
H	PAINT WITH RED								ON / OFF		REMOTE	DISPENSE

FIG. 9

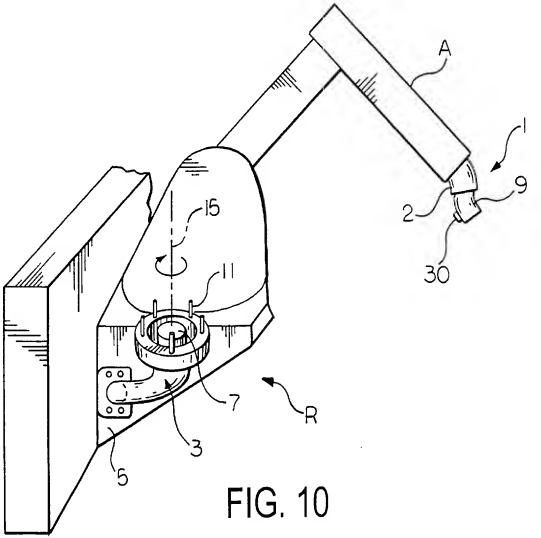

FIG. 10

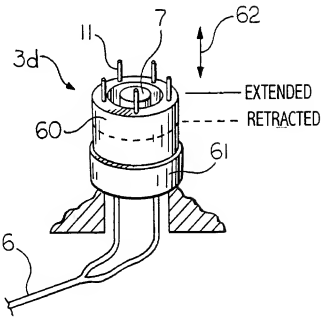

FIG. 11

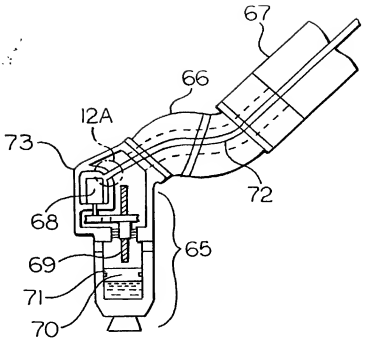

FIG. 12

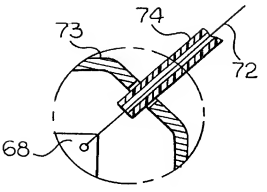

FIG. 12A

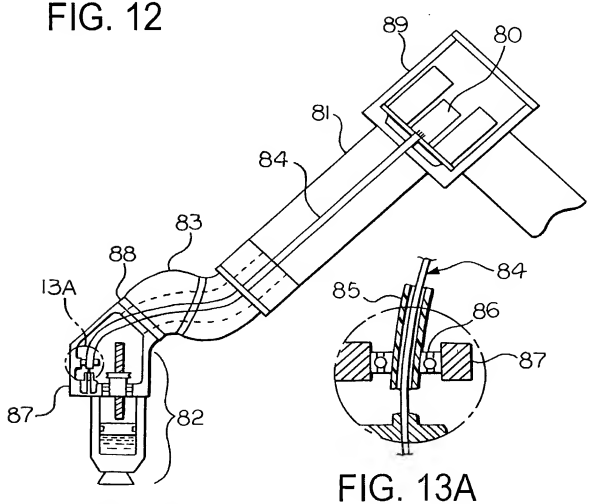

FIG. 13

FIG. 13A

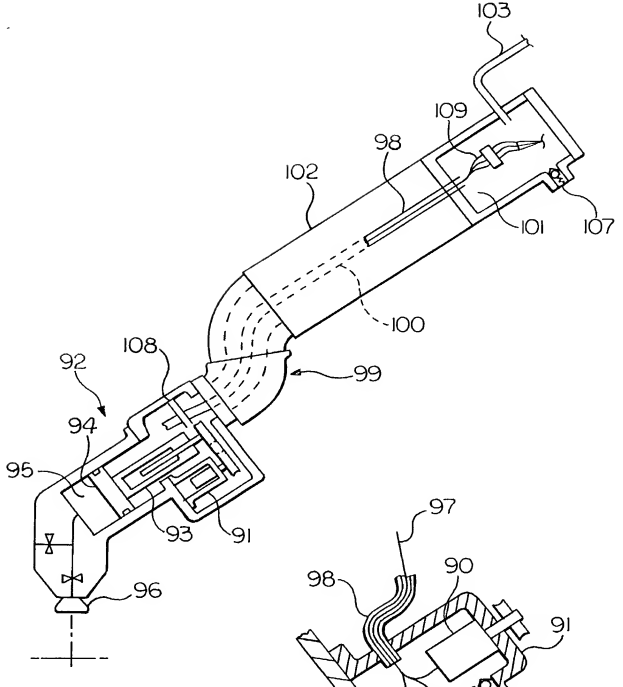
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FIG. 14

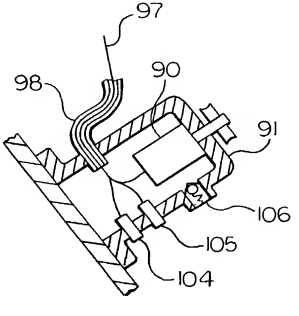
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FIG. 15

Approved for Public Release

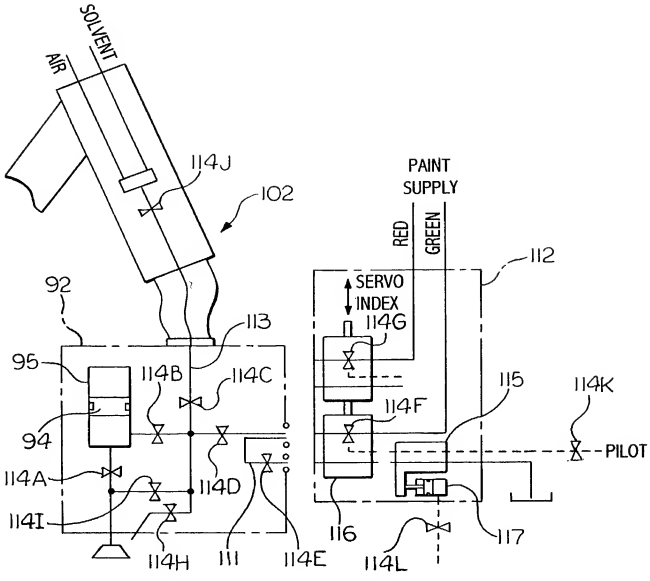

FIG. 16

FIG. 17

PROCESS SEQUENCE - CHANGING COLOR	DOCKED	VALVE											
		A	B	C	D	E	F	G	H	I	J	K	L
DONE PAINTING RED	NO												
CLEAN PISTON FACE & INSIDE BELL CUP	NO	ON	ON	ON							ON		
CLEAN OUTSIDE OF BELL	YES/NO			ON					ON		ON		
INDEX TO GREEN SUPPLY	YES/NO	VALVE POSITION N/A (CAN BE PARALLEL PROCESS)											
CLEAN SHROUD	YES	VALVE POSITION N/A (CAN BE PARALLEL PROCESS)											
PRIME LINES WITH GREEN	YES	ON	ON		ON		ON					ON	ON
FILL CAN WITH GREEN	YES		ON		ON		ON					ON	ON
CLEAN & DRY DOCKING INTERFACE	YES			ON	ON	ON					ON		ON
CONTINUE DRYING	NO			ON	ON	ON					ON		
PAINT WITH GREEN	NO	ON											

FIG. 18

PROCESS SEQUENCE – REFILLING SAME COLOR	DOCKED	VALVE											
		A	B	C	D	E	F	G	H	I	J	K	L
DONE PAINTING RED	NO												
CLEAN INSIDE & OUTSIDE OF BELL	YES/NO			ON					ON	ON	ON		
CLEAN SHROUD	YES	VALVE POSITION N/A (CAN BE PARALLEL PROCESS)											
PRIME LINES WITH RED	YES	ON	ON		ON		ON					ON	ON
FILL CAN WITH RED	YES		ON		ON							ON	ON
CLEAN & DRY DOCKING INTERFACE	YES			ON	ON	ON					ON		ON
CONTINUE DRYING	NO			ON	ON	ON					ON		
PAINT WITH RED	NO	ON											

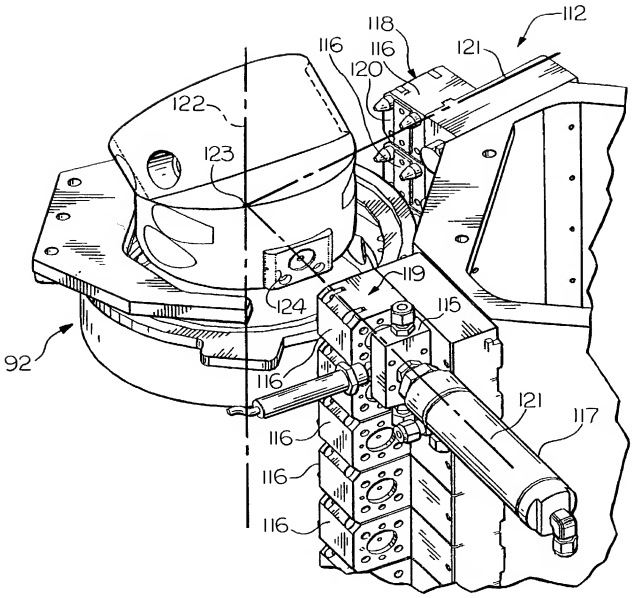
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FIG. 19

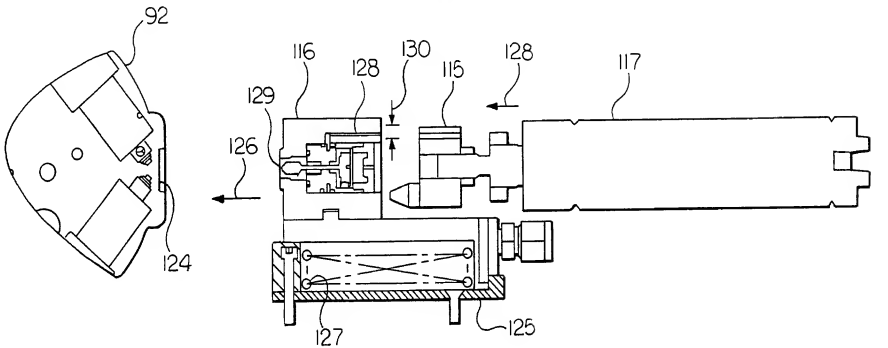

FIG. 20